Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band	)	GN Docket No. 18-122
	)	
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz	)	GN Docket No. 17-183 (Inquiry Terminated as to 3.7-4.2 GHz)
	)	
Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3.7-4.2 GHz Band	)	RM-11791
	)	
Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service	)	RM-11778

REPLY COMMENTS OF iHEARTMEDIA

iHeartCommunications, Inc., as debtor in possession ("iHeartMedia"), submits these Reply Comments in response to the Commission's Notice of Proposed Rulemaking in the above-captioned proceedings by which the Commission solicits feedback on proposals to permit terrestrial mobile use in the 3.7 -4.2 GHz spectrum band (the "C-band").[1]

iHeartMedia appreciates the Commission's goal towards the efficient use of the C-band spectrum, but the paramount policy objective must be the protection of incumbent uses, especially by broadcasters, whose established service to the listening public, as well as serving as distributors of public safety and national security-related messages, must not be undermined by proposals which would impact the reliability of the current satellite-to-receiving earth station

[1] *See Expanding Flexible Use of the 3.7-4.2 GHz Band*, Order and Notice of Proposed Rulemaking, GN Docket No. 18-122, FCC 18-91 (rel. Jul. 13, 2018) (the "*NPRM*").

network. In furthering that policy objective, the Commission should *not* entertain co-frequency sharing between terrestrial mobile services and satellite-to-earth station operations, which are especially subject to interference. To ensure the continued reliability of the currently well-functioning satellite-to-receiving earth station network, the Commission must retain full-band, full-arc coordination in any repacked C-band. Moreover, given the hazards of interference, point-to-multipoint ("P2MP") services should not be authorized in the C-band. Lastly, any C-band repurposing plans, including those put forth by the C-Band Alliance and T-Mobile, must demonstrate how such a plan would not diminish the reliability or ubiquity of the existing content distribution system, or sacrifice our nation's public safety and security.

I. The Commission Must Protect Incumbent Uses Of C-Band Spectrum, Particularly Those Of Broadcasters Using Receive-Only Earth Stations.

iHeartMedia is a leading global media and entertainment company specializing in radio, digital, outdoor, mobile, social, live events and on-demand entertainment. Subsidiaries of iHeartMedia include the licensees of 860 full-service broadcast radio stations, serving 164 markets throughout the United States. iHeartMedia relies heavily on receive-only earth stations operating in the 3.7-4.2 GHz portion of the C-band to receive programming for broadcast to the public by its radio stations, including sports programming and syndicated programming from numerous sources.

Also under the iHeartMedia umbrella is Premiere Networks, which syndicates 90 radio programs and services to more than 5,000 radio affiliations nationwide, reaching over 190 million listeners weekly. iHeartMedia's Premiere Networks' syndicated programs are most typically captured by its 5,000-plus radio affiliates via their receive-only earth stations operating in the 3.7-4.2 GHz portion of the C-band. Moreover, the C-band is utilized by Premiere Networks in partnership with the Federal Emergency Management Agency to transmit the

Emergency Alert System ("EAS") nationwide messages to Premiere's radio affiliates as a redundant delivery method to ensure full, country-wide participation.

Given the critical importance of the C-band for receive-only earth station operations for broadcasters and for public safety and national security-related messages, iHeartMedia has emphasized in its submissions in this proceeding, and in GN Docket No. 17-183, the need for the Commission to focus on the protection of incumbent uses of the 3.7-4.2 GHz spectrum, particularly broadcasters using receive-only earth stations, as the Commission evaluates options for the efficient use of the C-band.

Many Commenters, including, but not limited to broadcasters, have stressed that the C-band offers reliability, quality, and cost efficiency that cannot be matched by other technologies or in other satellite spectrum, so that protection of incumbent uses must be paramount.[2] For example, National Public Radio, representing more than 1,000 independently owned local public radio stations, "is concerned that, unless properly implemented, allowing additional terrestrial use of the C-band spectrum, particularly for mobile broadband, would threaten the public's access to local public radio station broadcasts of news, public safety information, and unique community and cultural programming… ."[3] Cumulus Media Inc. (which owns and operates 440 radio stations in ninety markets) and Westwood One, LLC (which utilizes over 5,000 C-band receive-only earth stations in its distribution of news, talk, sports, music and other audio content to 8,000 radio station affiliates) stresses that "[i]f the Commission

[2] *See*, *e.g.*, Reply Comments of iHeartMedia on Report on the Feasibility of Allowing Commercial Wireless Services, Licensed or Unlicensed To Use Or Share Use of the Frequencies Between 3.7-4.2 GHz, at n. 3, 4, 5, 6 and 7 (Jun. 15, 2018) (referencing comments stressing the need to preserve the integrity of existing services from the broadcast arena, including content providers, as well as from satellite providers, the cable industry and the aviation field).
3 *See* Comments of National Public Radio, Inc. at 2 ("NPR Comments").

were to propose an alternative regulatory framework, it must ensure that there is no degradation in the high reliability, quality, capacity, and efficiency that exists today in the C-band.[4]

The National Association of Broadcasters, citing to the reliance of consumers on television, cable and radio programming distributed by the C-band, states that "[b]ecause of the vital role the C-band plays in content distribution today, any consideration of expanded operations in the C-band should start with the protection and preservation of the capabilities the C-band offers users: a seamless and reliable content distribution system that can serve every corner of the nation."[5]

Likewise, the Content Companies rely on the C-band "to distribute compelling and popular sports, news, and entertainment programming to nearly 120 million American television households, representing over 300 million people," and state that "[p]roposals in the NPRM, however, would put that nationwide video delivery system at risk."[6] Similarly, the North American Broadcasters Association stressed the "principle of NO HARM to the broadcasting ecosystem and the public that it serves must be at the core of any rule making considerations…."[7]

Block Communications, Inc., Gray Television, Inc. and Meredith Corporation, which collectively operate 160 television stations in 35 states across the United States, urge the Commission to "only reallocate spectrum if doing so will not harm incumbent users," and if the Commission decides to reallocate C-band spectrum, to "adopt protections for incumbent users so

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4 *See* Comments of Cumulus Media Inc. and Westwood One, LLC at 2, 4 ("Cumulus/Westwood Comments").
5 *See* Comments of the National Association of Broadcasters at 3, 6 ("NAB Comments").
6 *See* Comments of The Content Companies (CBS Corporation, Discovery, Inc., The Walt Disney Company, 21st Century Fox, Inc., Univision Communications Inc., and Viacom Inc. at 1 ("Content Companies Comments").
7 *See* Comments of the North American Broadcasters Association at 1 ("NABA Comments").

that their current operations will not be frozen in place" thereby permitting C-band receive only earth station owners "to relocate or replace their earth stations if they move their facilities to new studios, new towers or other new locations, or if they acquire additional programming."[8]

Eternal Word Television Network, Inc., which provides Catholic television, radio, and online content domestically and internationally, states that it "has many affiliates that are rural, municipal, or cooperatives located in areas that are not served by robust infrastructure. C-band provides these systems with full-time, full broadcast quality signals."[9]

The C-Band Alliance notes the importance of the reliable C-band system, observing that the system "play[s] a central role in the nation's telecommunications backbone, supporting a broad range of services enjoyed and relied on by U.S. consumers every day, both now and in the foreseeable future," and "supports government and public safety operations, provides critical links to remote and underserved areas, and ensures communications systems' availability during disasters when terrestrial services fail."[10]

iHeartMedia agrees wholeheartedly with the conclusion of the Satellite Industry Association that: "Any action pursuant to the Notice must recognize and safeguard the pivotal role C-band networks play in the nation's communications infrastructure, from supplying video

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8 *See* Comments of the Local Broadcasters (Block Communications, Inc., Gray Television, Inc. and Meredith Corporation) at 1-2. Moreover, notwithstanding the Commission's efforts to encourage registration of incumbent receive-only earth stations, clearly the remaining impediments to registration suggest that "there may be many more earth stations operating in the C-band that will not be registered by the October 31, 2017 filing deadline." *See* Cumulus/Westwood Comments at 8-10; *see also* Comments of the American Cable Association at 6 (thousands of earth stations may still remain unregistered); Comments of the Society of Broadcast Engineers, Inc. at 3 ("SBE Comments") ("The vast number of registrations that has occurred since the Commission opened the filing window for registrations indicates that there are likely… far more C-Band receive-only Earth stations than were assumed to exist when the Commission issued its Notice of Inquiry in Docket 17-183 … or released the instant Notice….").

9 *See* Comments of Eternal Word Television Network, Inc. at 2, 4 ("EWTN Comments").

10 *See* Comments of the C-Band Alliance at 13, 54.

and audio programming enjoyed by virtually all U.S. consumers, to providing basic, lifeline connectivity in remote regions that lack terrestrial alternatives, to enabling government services critical to public safety and national security. The tens of billions of dollars that satellite operators and their customers have invested in dozens of C-band space stations and thousands of C-band earth stations have a ripple effect that extends much further, supporting other industries that are major engines of the U.S. economy. To ensure that U.S. users have ongoing access to these integral and necessary services, the Commission must maintain policies that enable flexible, efficient, high-quality satellite offerings in response to customer demand."[11]

Many commenters, including NAB, observe that "no other satellite spectrum band … can replace the C-band."[12] NAB explains that "[s]atellite services offered in other bands are either congested, subject to reliability concerns, or do not provide nationwide coverage. Above 10 GHz, rain attenuation is the dominant impairment to radio wave propagation through the atmosphere…. Many areas of the country are subject to periodic heavy rainfall. The C-Band is the only commercial satellite band below 10 GHz. Even small changes in the level of reliability provided by C-band distribution could lead to service disruptions and outages that would frustrate consumers and cause severe financial harm to broadcasters, MVPDs and programmers."[13]

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[11] *See* Comments of the Satellite Industry Association at i.

[12] *See* NAB Comments at 5; *see also* EWTN Comments at 3 ("There is no other reliable substitute for C-band distribution in the foreseeable future"); Comments of Comcast Corporation and NBCUniversal Media, LLC at 21-22 ("The susceptibility of the Ku-band and Ka-band to interference is a shortcoming that makes these bands poor candidates to replace C-Band uses, including for remote newsgathering and on-location reporting.").

[13] NAB Comments at 5-6; *see also* Content Companies Comments at i ("there is no adequate substitute to the C-band for the Nation's video delivery pipeline. Alternative spectrum bands suffer from weather-related reliability issues, and fiber is not widely available enough to replace current fixed satellite services ("FSS") usage of the C-band."); The Brattle Group, Maximizing the Value of the C-Band, at 2, filed at Appendix A to Joint Comments of Intel Corporation,

The listening public accessing valued programming through iHeartMedia's radio stations and via affiliates of the Premiere Network would be harmed if the current level of transmission reliability were undermined by the Commission's actions in this proceeding. Moreover, disruptions to the C-band delivery system pose a threat to the redundant delivery of EAS messages to Premiere Network's radio affiliates. Likewise, the investments in this vast infrastructure currently utilized to disseminate broadcasts to the public would face challenges if the Commission adopted a system that did not adequately, and without further expense to incumbents, replicate the well-functioning C-band distribution system.

II. Co-frequency Sharing is Not An Acceptable Approach

Moreover, iHeartMedia shares the concerns of other commenters, as well as the Commission, that co-frequency sharing between terrestrial mobile services and satellite operations is not feasible. As the Commission itself recognizes in the *NPRM*, because signals from satellites are very weak when they reach the ground, terrestrial mobile operations could cause harmful interference to earth stations over large distances.[14] Commenters such as the Society of Broadcast Engineers share this concern: "Broadcasters have very little alternative to the use of their existing C-band antennas at broadcast studios. If interference from a commercial wireless provider in the 3.7-4.2 GHz band occurs and the program feed is interrupted, the broadcast programming ceases."[15] NPR explains that its Public Radio Satellite System ("PRSS") "is completely dependent on extremely low-power satellite-to-earth station C-band downlinks

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Intelsat License LLC and SES Americom, Inc. ("Because the C-Band is at a lower frequency than either the Ku- or Ka-Bands, C-Band communications are less susceptible to atmospheric attenuation (known as "rain fade") than other bands.").

14 *See* NPRM at ¶ 50.

15 *See* SBE Comments at 4.

that are particularly susceptible to interference."[16] Any risk of interference to the C-band satellite services on which iHeartMedia and other broadcasters rely is unacceptable, not only from a business revenue perspective, but because it jeopardizes the ability of American consumers to receive the programming content they want and upon which they rely.

Full-band, Full-arc Coordination by the Commission Must Be Retained

It is imperative that the Commission retain full-band, full-arc coordination in any repacked C-band. As explained by commenters, including the Content Companies, "…the flexibility of [such coordination] remains crucial to uninterrupted video content delivery, particularly for live or unexpected events that require swift movement to other satellites and/or frequencies."[17] The North American Broadcast Association echoes this concern: "NABA strongly opposes any changes, as part of this rule-making, to reduce the current full-band/full-arc protection and licensing structure for earth stations operating in the C-Band. Earth stations need to be able to continue to be permitted to reorient adaptively by switching to alternate transponders operating on different frequencies in the band and pointing toward alternate satellites for enhanced redundancy and increased reliability."[18]

III. New P2MP Services Should Not Be Permitted in the C-Band

Furthermore, the record here cautions the Commission against allowing new point-to-multipoint ("P2MP") services in the C-band.[19] Broadcaster Luken Communications, LLC ("Luken"), provides a concrete example of the hazards of potential accommodations to P2MP, when it was forced to re-orient its earth stations to alternate positions and frequencies due to the

[16] *See* NPR Comments at 2.

[17] *See* Content Companies Comments at ii.

[18] *See* NABA Comments at 4.

[19] *See NPRM* at ¶¶ 116-32.

failure of the AMC-9 satellite.[20] Luken notes that "[h]ad P2MP coordination been required, it is likely that Luken and its affiliates would have sustained substantial losses of revenue and viewership."[21] P2MP coordination obligations could also have a future negative impact: "potential affiliates of Luken may be unable to suitably receive Luken's C-band satellite signal due to terrestrial interference or be dissuaded from affiliating with Luken due to undue and burdensome regulatory issues and coordination efforts with new P2MP services operating in the C-band spectrum."[22]

IV. Repurposing Plans Must Demonstrate How They Will Not Diminish The Reliability or Ubiquity of Existing Content Distribution, Or Sacrifice Public Safety and National Security

Industry participants, including the satellite operators that formed the C-Band Alliance, have proposed various means for the Commission to garner spectrum for 5G, with the goal of accomodating incumbent C-band satellite uses.[23] In contrast to the C-Band Alliance's "Market-Based Approach," T-Mobile has proposed a Commission-administered "market-based auction mechanism" to re-purpose the C-band.[24]

In evaluating such alternatives and options, iHeartMedia concurs with NAB that, whatever path is chosen by the Commission, its decision making should be guided by the fundamentals that "any proposal to reallocate a portion of the band, or to allow expanded operations in the remainder of the band, must explain in detail how content distribution can be protected without sacrificing the reliability and ubiquity of existing C-band operation," and that

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20 *See* Comments of Luken Communications, LLC at 5.
21 *Id.*
22 *Id.*
23 *See* C-Band Alliance Comments (discussing its "Market-Based Approach").
24 *See* Comments of T-Mobile, USA (proposing a Commission-administered, market-based auction mechanism).

"industry-generated spectrum targets should not outweigh other public interest considerations."[25] Such a balanced vantage point should ensure that incumbent earth station uses of the C-band, which have long been critical to the distribution of programming of established value to our nation, as well as public safety and national security uses, are not undermined to the detriment of the public interest.

Respectfully submitted,

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[25] *See* NAB Comments at 10.